INEEL PUBLIC MEETING ON PROPOSED CLEANUP PLAN FOR IDAHO CHEMICAL PROCESSING PLANT (INTEC)

BOISE, IDAHO

Wednesday, November 18, 1998

Nancy Schwartz Reporting
2421 Anderson Street
Boise, Idaho 83702
208-345-2773
Fax 208-424-1231
e-mail NSchw208.aol.com

PUBLIC COMMENT

INEEL PUBLIC MEETING ON PROPOSED CLEANUP
PLAN FOR IDAHO CHEMICAL PROCESSING PLANT
(INTEC)

BOISE, IDAHO

Wednesday, November 18, 1998

Nancy Schwartz Reporting
2421 Anderson Street
Boise, Idaho 83702
208-345-2773
Fax 208-424-1231
e-mail NSchw208.aol.com

PUBLIC COMMENT

BOISE, IDAHO, WEDNESDAY, NOVEMBER 18, 1998

MR. SIMPSON: Welcome and thanks for your interest in attending this meeting tonight. I'm Erik Simpson. I'm the INEEL Community Relations Plan coordinator for the INEEL Environmental Restoration program.

We're here tonight to discuss the Waste Area Group 3 Remedial Investigation and Feasibility Study, and the proposed plan that resulted from that investigation. Waste Area Group 3 is the Environmental Restoration Program designation for the Idaho Nuclear Technology and Engineering Center, and many people refer to it formerly as the Chem Plant.

This is the fifth facility-wide environmental investigation that we've completed at the INEEL. And we have four more to go under our Federal Facility Agreement and Consent Order. Since this is really probably the most complex site that we have investigated thus far, DOE and EPA and the State of Idaho already have extended the comment period an additional 30 days, and it will end December 22nd.

I guess I would like to remind people to

make sure to sign in just so we can get you the Record of Decision when that is signed later on.

The last time we held a clean-up meeting here in Boise was this last February when we were discussing the Test Area North Remedial Investigation and Feasibility Study. The proposed plan for that investigation was revised at the public's request and also at the request of our Citizen's Advisory Board, and it will be rereleased here shortly.

We have several supporting documents here tonight. We have fact sheets. We have the Waste Area Group 3 Proposed Plan. We have comment forms, and our Community Relations Plan. And at this time, I guess I would like to go through the agenda quickly with you.

First we're going to hear a presentation on the Remedial Investigation and Feasibility Study, then we will have a question and answer session after that. Since it's a fairly lengthy presentation, I would kind of like to hold off on the detailed questions until after the presentation is completed. If you have a question that comes up that you need to be answered and it is detailed, I can write it on the tablet here at the side of the

Page 5

room, or I have some cards back on the back table where you can just jot down your question, and we'll get to it during the Q and A session.

Following questions and answers, we will have a public comment session where your comments will be entered into the record officially, and we have a court reporter here tonight who will be recording all portions of this public meeting.

Also I want to remind you that we have an evaluation form on the back of our agenda. If you don't mind, after the meeting take a few moments and jot down your impressions of this meeting. This will help us focus on some of our future meetings, maybe some improvements that we need to make.

At this time, I guess I would like to introduce the presenters here tonight. Representing the Environmental Protection Agency, Region 10, Seattle, we have Wayne Pierre. And Wayne will give an overview, and he will also talk about the Tank Farm soils at the Waste Area Group 3. We have Talley Jenkins representing the Department of Energy. And Talley will talk about soils under buildings and structures, other surface soils, SFE-20 tank system and the buried gas

Page 6

cylinders. We have Scott Reno. Scott is with the State of Idaho Department of Health and Welfare, Division of Environment Quality. He will talk about perched water and the Snake River Plain Aquifer.

I should mention that these three agencies work together in preparing this proposed plan. And we're close partners during the entire Remedial Investigation Feasibility Study. So with that, I'll turn it over to Wayne.

MR. PIERRE: I would hope that before we start, if people haven't gotten this from the back of the room yet, it would probably make it easier if you could get a copy of these two documents.

This is the presentation that we're going to be giving. In the interest of time, we probably won't hit each and every bullet. Obviously, the proposed plan, there are references that we will probably be making to it.

I would also like to draw everybody's attention to the fact that we have a postage-paid card in the back where you can put your comments together and send it to us. And we would very much appreciate if you would do that.

So for those who aren't familiar with

Page 7

the site, it's approximately 890 square miles. As Erik mentioned, we state 10 waste area groups, but we combine Waste Area Group 6, and Waste Area Group 10 is miscellaneous; basically, it's the rest of the facility. Most of the work goes on in this central corridor location. We're interested in this facility here, WAG 3. It's referred to by several names. I'm probably going to concentrate on the word Chem Plant for the sake of ease tonight.

So to get started, I guess questions that we thought that you may have, as far as why are we here. As Erik mentioned, we are looking for the public's input, comments on the proposed plan. The alternatives that we think of as the right alternatives, we've identified what we think are the preferred alternatives. Do you agree? Or are there issues that we didn't properly take into consideration.

If you look at the cost of this project, $175 million at present value. It costs an awful lot of money to deal with radioactive waste. The toxicity of RAD is orders of magnitude greater, so it takes much less radionuclides as compared to chemical toxicity.

Page 8

Why do we want public input? Again, it's one of the criteria that we use in assessing whether or not to go forward and how to go forward on a facility. And I guess last but not least, why is this proposed plan so complicated? It's over 50 pages long. The INTEC, the Chem Plant Facility, is very complicated. It's got about 60 percent of the nations high-level waste -- excuse me, about 30 percent of the high-level waste is located in Idaho. Idaho has 60 percent of the nation's transuranic waste, but that's at a different location.

Looking at the background for those unfamiliar, the facility began in 1952. Erik already mentioned the various terms that we have: The Idaho Chemical Processing Plant, WAG 3; WAG 3 is the Waste Area Group; Idaho Nuclear Technology and Engineering Center, which is the newest name given to the facility. What we're here to talk about today is numerous spills. Over the years that this facility has operated -- and I need to mention that the operation of this facility includes the dissolution of fuel rods. If you want to dissolve a fuel rod, it takes very powerful acid. It takes hydrochloric and nitric acid as an

Page 9

example. When you have a lot of lines, which are buried under ground, and you're running hydrochloric and nitric acid, and there have been a number of leaks that have occurred over the years at the facility. And that is a large part of what we're here to talk about.

This facility is listed on the EPA's National Priority List. We are fence to fence; as such, we are in engaged in what is typically called the Superfund clean up at the facility.

The method that we're using to implement the clean up at the site under Superfund and the state's Hazardous Waste Corrective Action Program is the Federal Facility and Consent Order. It provides an organization for prioritizing and undertaking clean up at Idaho National Engineering and Environmental Laboratory.

Also a little bit contrary to what Erik said, if there is any clarifying questions that anyone has, stop me at any time. Back to, as I mentioned, you were going to need the proposed plan. Table 11, which is in the back, on page 48 of the proposed plan, provides a brief summary of the groups that we're looking at the Chem Plant, at the WAG 3 facility, and what we hope or what we

Page 10

think is the preferred alternative.

We assessed 95 potential sites. Most of the sites were found to be acceptable risk.

AUDIENCE MEMBER: I just noticed for the heading for the table of each one of these soil groups, and, yet --

MR. PIERRE: That's correct, there are not. And there are other typos that I will point out as we go through.

But the 40 groups, when you take away the four, we are under the existing state registry programs which were found to have unacceptable risk. And to talk a little about what does that mean, unacceptable risk.

Under the National Contingency Plan, it established a procedure for identifying and understanding risk. We try to provide an analysis of what is called the baseline risk. That is baseline risk to human health and the environment for the current scenario and reasonable future scenarios that may occur at the facility. We try to determine the levels of chemicals, including radionuclides. Superfund does address both chemicals and radionuclides that can remain on site. In other words, this refers to the residual

Page 11

risk that a site posed.

One of the objectives, obviously, if you find a site that poses an unacceptable risk, what can we do to make it an acceptable risk and provide the basis for comparing potential health impacts of these various alternatives. As we look at each of those alternatives, we try to decide what that residual risk would be if the alternative was successfully implemented, and we are also interested in looking at the ability to compare sites on a national basis as far as making decisions between sites, between states.

INEEL is government property. One could ask, well, if it's government property, is it secure, why do we need to clean it up? Unfortunately, and I think as a direct response to what happened with the base Realignment and Closure Act, there is a lot of Department of Defense facilities were government property, and there was a belief that they would also remain government property for indefinite periods of time. Some of those are now in the private sector.

The fact is that as you looking towards the future, it is a very, very hard to make an assessment on whether government property will

Page 12

remain government. There is an act of Congress to make it a park. For Idaho National Engineering and Environmental Laboratory, Congress has not decided to do that at this time.

So we need to take a look at what are reasonable future scenarios. A reasonable future scenario, when you are look looking at periods of 100 years, is residential. It is quite possible that the facility can -- even if it were to just revert to -- what they reverted to the tribe, the ShoBan Tribe, they could choose to sell the land and have residences on it. So we do look at that as one of the issues.

We look at the current industrial scenario also. And for cancer-causing agents -- radionuclides clearly fall into that category, we determine that for acceptable risk at INEEL, the risk has to be less than 1 in 10,000. That is 1 in 10,000 potential increase in tumors, which may become cancer causing. It is a conservative estimate. It is the highest end of the risk range also. The acceptable risk range for the National Contingency Plan is 1 in 10,000 to 1 million. But for some of the contaminants that we're dealing with, their background represents 1 in 100,000.

Page 13

AUDIENCE MEMBER: Do you really consider residential use as being one of the reasonable scenarios?

MR. PIERRE: When you look at 100 years out, not as you look at it today. As you know, our country is a little over 200 years old.

There were a lot of Department of Defense facilities -- ADAC, for example, up in the Aleutian Chain, there is going to be government property forever if you're talking about selling it to a tribal entity.

The tiered approach that exists for evaluating alternatives -- once you've done the risk assessment and if you've decided that there is a nonacceptable risk, the next step is: What can I do about it? In other words, what are the alternatives? In order to figure out the alternatives, first you need to establish objectives: What am I trying to achieve? If I have potential groundwater contamination, I have an objective about trying to do something that is going to restore the aquifer to drinking-water quality.

Once I've established what my objectives are, I'm going to identify and screen feasible

Page 14

alternative technology. Those technologies, they include do nothing, which is a base for comparison. The treatment technology and containment technology, there may be variations on that. They may dig it up and take it elsewhere as an alternative. Then we would assess, individually, those alternatives against the criteria that we've established, and I will show that on the next slide. Once we've assessed whether or not those alternatives are reasonable for those criteria, we would then evaluate between the alternatives to establish which is the best alternative in our understanding.

These are the nine criteria that are established under the National Contingency Plan. The first two are must pass. We must comply with the law and we must protect health and the environment. If the alternative doesn't achieve that, the alternative is not worth considering.

Once we have passed this threshold, then we take a look at the technical concerns and try to identify whether or not the alternative will achieve some measure of permanence and will be effective over a long term. The reduction of toxicity, mobility, or volume through treatment is

Page 15

statutory requirements our Congress put into the Superfund statute.

Short-term effectiveness -- some remedies may be worse than the no action alternative, in terms of if you build some sort of a treatment plant and it, in the short term, emits more toxics than what you actually started with. So that is what we assess on short term.

Implementability, both availability of material and supplies and administrative concerns that would apply to that. And, obviously, last and not least, cost. This is not in order of importance. This is in order of what happens. The first thing you do is threshold. The next is identify the balancing. Once the agencies have done this, then what we need to do is to get stakeholder and community acceptance. Community acceptance is one of the things that we're looking at in talking with you and hoping that either what we're proposing makes sense to you or you have alternatives or suggestions that can make it make sense to you.

With that, what I would like to do is go to a specific group. I know in reading the proposed plan you will see terms like "group" or

Page 16

"soil group" and the all these designations, CCP 95 and everything else under the roof. What I would like to do is keep it into -- the grouping is really just an administrative and management function. It doesn't make sense to be in that order.

So for the soils, there are 11 sites that are represented here that are connected with the Tank Farm and connected with releases to the Tank Farm. That is what this Group 1 represents. The Tank Farm consists of -- and there is a picture over here -- and as far as how the Tank Farm was initially constructed, you will also see a picture in the proposed plan.

I have a little overhead here. This shows the construction of a couple of the tanks back in the '50s. As you can see, this is gray here. These tanks are buried. They are sitting on the soils and they are about 10 feet below grade. This is what it looks like. For people who have been out there, the stack, which is a good measuring point, is located over there.

What do we know? We know that there is a lot of contaminated soil. We know that some of the concentrations detected are really, really

Page 17

high. This number, 276 nanocuries per gram of plutonium-239, 240 is a number that would require that soil to go to WIPP. It's transuranic; 100 nanocuries is the definer for transuranic.

We know that most of the contaminants located in the WAG 3 are located in the Tank Farm soils. Now, that is not saying that the Tank Farm is the only problem, but it's saying that most of the contaminants are there. If you got -- it's kind of like, okay, in one case I have 1 in 100, in another case, I have 1 in 10; neither one of those are acceptable so it doesn't change anything.

And we also know that just sitting there and doing nothing, there is a lot of precipitation running into the Tank Farm. These contaminants are being leached and going down towards the Snake River Plain Aquifer and entering the Snake River Plain Aquifer.

As would always be the case, we know something, and there is something that we don't know. We don't know the exact method of how the tanks' associated piping will be closed. That is something that will be determined in a multistep process. Two of those steps are one, an Environmental Impact Statement is being developed

Page 18

and should be completed by the year 2000. Number two, these tanks are subject to the Hazardous Waste Management Act, and would be required to close out pursuant to that. Those are at least two steps that need to be coordinated in order to know what will be the fate of the tanks. Obviously, I just gave two programs, but these tanks are under the Governor's agreement and that has to be addressed.

We also don't know much about plutonium transport. The Tank Farm soils are very complicated because of all the leaching that occurred. And we don't know the oxidation state of the plutonium. We don't know what the attenuation of the plutonium, how it's held up on the soils, and whether or not the soils still have their original pH after all that acid leaks through it.

We don't know all the spills that are in the Tank Farm. And this a moving target because as the Tank Farm operates, there will probably be future spills, so we will probably never know all the spills that are in the Tank Farm until we clean up the Tank Farm and it's no longer operating.

AUDIENCE MEMBER: Do you expect most of the major questions and that issue to be resolved by the EIS?

Page 19

MR. PIERRE: The EIS does not decide the fate of the Tank Farm. The Governor's agreement, the Hazardous Waste Management Act, and other actions, what EIS provides is a basis for evaluating alternatives and any information that can be used by the programs, like the hazardous waste program in the state, as they evaluate the permit for the closure.

So, as I mentioned before, in the system that we have, we first need to identify the objectives before we look at what the alternatives are. So the objective for the Tank Farm is to protect the drinking water aquifer, the Snake River Plain Aquifer. And by doing that, by reducing the water infiltration through the contaminated soils.

Prevent worker contact with contaminated soils. Now, this exists today, obviously. This Tank Farm is fenced. It's underground. But the commitment that we're making here is to ensure that this is occurring, not that it's just dependant upon operational controls by DOE, but that DOE Environmental Program takes an active interest in assuring that they occur.

And we also, as I mentioned, because of the uncertainties, need to collect more

Page 20

information. And the Remedial Investigation Feasibility Study for the Tank Farm soils stage 2, one can call it, has been initiated.

With those objectives in mind, we come to what the alternatives are. The No Action Alternative is a base for comparison. In other words, we always look at, well, if I did nothing, what does it mean? As I mentioned, you don't have an action, you don't usually get to looking at these alternatives unless there was an unacceptable risk. So it kind of answers its own question, if I did nothing, I have a nonacceptable risk.

The second one is Institutional Controls. Now, Alternative 2 is on the sketchy side because it really doesn't go after protecting the drinking water aquifer.

And then we have Alternative 3, which reduces water infiltration through the contaminated soils. The attempt there is to reduce water infiltration by as much as 80 percent and thereby slow down the leaching of contaminants from those soils into the aquifer.

This is an interim action that we're proposing. The reason that it's an interim is we don't have enough information to say today what

should be the final remedy. Should we dig all these soils up and send them some place, which may be WIPP, based on their concentration? Do we try some sort of a technology like vitrification? Do we cap? We don't have that information today. We need to have more information on the leaching of plutonium.

As I was mentioning earlier, Alternative 3 is our preferred alternative because it best meets the objectives that we stated for this group.

With that -- are there any clarifying questions? I would like to introduce Talley. He will talk about contaminated soils.

AUDIENCE MEMBER: I have one question, a general background question. Is it intended, eventually, that the entire Chem Plant will be decommissioned?

MR. PIERRE: The Chem Plant doesn't have a life past 2035 that I know of.

AUDIENCE MEMBER: Okay. Thank you.

MR. JENKINS: Any other questions before I start on contaminated soils? Well, I'm Talley Jenkins with the Department of Energy, and I will go through Groups 2, 3, 7, and 6.

Under Group 2, we have four releases. The first one is in an old French drain or a dry well type facility where we had some basin water that was disposed of from '52 until about 1968. It's located underneath this part of the 603 facility. Part of that site was excavated prior to constructing the dry site for storage.

We have two sites located underneath the 604, 605 complex. Occasionally it's referred to the PEW, or Processed Equipment Waste Facility. There was a -- we found liquid underneath a stainless steel liner, one of the hot cells. We're not sure if it leaked to the environment, but it was out of its containment area. We also -- when they were putting a life safety or fire exit underneath the facility, they dug through some contaminated soil.

Then we have the fourth release underneath the 601 complex. This was a line, a steel line that corroded away and released radioactive liquid waste into the environment. That is basically what we know.

What we don't know, is we don't know what the future of D&D for these facilities will be. We don't know if the building will act as a

long-term cap. We believe at this point it's currently acting or functioning as the equivalent of a cap, but that may not be adequate for long term.

Based on this, we believe that a deferred action is warranted. Again, the objective is this will allow us to protect the aquifer. It would also prevent exposure or contact with contaminated media.

We looked at three objectives underneath this one. Again, the No Action for comparison purposes. Alternative 2 is Containment. That is basically placing an engineered cap -- an engineered multilayered cap over each of these four sites following the D&D of the facility. Alternative 3 is essentially Alternative 2, unless the facility is removed from that location, at which point we would excavate, treat if necessary, and dispose of the soils. Based on this, the agencies believe Alternative 2 is the best choice.

AUDIENCE MEMBER: I have some questions. On the building 601, the radioactive liquid waste, do you know what was in it?

MR. JENKINS: Yes. It was basically diluted some deconing solutions and things like

that that eventually -- eventually, at the Chem Plant, everything ends up at the Tank Farm, but this was diluted deconing solutions from various clean-up operations in there.

AUDIENCE MEMBER: And you mentioned capping over. Does this include capping under or excavating the soil in any way?

MR. JENKINS: No. For the capping or Alternative 2, no, it would be placing a cap over the area with -- let's say, for instance, that the building was entombed in place, i.e, turn it into a giant block of concrete. We would build a cap over that structure.

AUDIENCE MEMBER: The assumption being, then, it would be protected from precipitation, et cetera.

MR. JENKINS: Yes, we would design a cap situated for that. But Alternative 3 is contingent -- for instance, if we took the building away, then the soils would be available to be excavated, and we would take the soil away.

Any other ones on Group 2?

Group 3, this site is comprised of 20 sites, generally ranging anywhere from spills and leaks of decon solution, storage water,

Page 25

leaching from contaminated equipment, some atmospheric releases, other plant waste water disposals, and we have a pile of boxes of contaminated soil.

What we know, is these sites present an unacceptable risk. They are contaminated with both metals -- or contaminated with radionuclides. Some sites have metals. The primary risk driver is the radionuclides, but there are a few sites that present an ecological risk due to metals.

Contamination at these sites ranges anywhere from a couple of feet for some sites, all the way to the top of the basalt, which is approximately 40 feet. Based on how we've drawn the sites, we believe there is about 82,000 cubic yards that would need to be excavated. However, that is predicated upon an excavation depth of 10 feet.

But the way we conducted our investigation is, we focused on the hot spots. We generally knew where the release was, so we sampled there. That did not give us a real good handle on the horizontal or vertical extent of the release, which gives us an uncertainty. The volume could increase. In addition, there may be levels of

Page 26

contamination below 10 feet that would present enough leachability that they could be an impact on the aquifer and, as such, during the excavation or even the design phase, we would have to look at how much additional soil below the 10 feet we would have to deal with.

Based on this, the agencies believe remedial action is warranted. Again, this would allow us to protect the aquifer and prevent exposure to both current and future receptors.

We looked at five alternatives here. Again, the No Action for comparison purposes. Alternative 2 essentially restricts it further. There would have to be administrative controls placed such that the areas could not be turned over to the public.

Alternative 3, again, would place a multilayer cap over each of the sites. The last two alternatives are remove and dispose. The first one being remove and on-site disposal. The second one being remove, treatment and off-site disposal.

In the case of the remove an on-site disposal, this would be to construct an engineered disposal facility similar to what a RCRA Subtitle C facility would be, which would include

Page 27

liners, leachate collection and a multilayered cap placed over the top for long-term disposal.

Based on this, the agency's preferred Alternative is 4A. Questions?

AUDIENCE MEMBER: Could I ask why the off-site disposal option was not preferred?

MR. JENKINS: Costly, much more costly.

AUDIENCE MEMBER: On what basis were those costs derived?

MR. JENKINS: Actual prices that the department has paid in the past for disposal.

AUDIENCE MEMBER: Versus?

MR. JENKINS: Versus what we estimate it would cost to construct and operate a disposal facility.

AUDIENCE MEMBER: What about evaluation of private disposal options?

MR. JENKINS: It was private. We used it for representative cost.

MR. JENKINS: Basically.

AUDIENCE MEMBER: Do the preferred alternatives include future actions such as possible vitrification, waste reduction, technologies, this sort of thing?

MR. JENKINS: No, we didn't factor that

Page 28

in. Any other questions?

AUDIENCE MEMBER: Yes, I'm sorry. I do have another question. Alternative 3, I'm intrigued by this couple of dozen little landfills. What does that mean?

MR. JENKINS: That means, basically, we would place a cap over each one of those 20 release sites.

AUDIENCE MEMBER: Thanks.

MR. JENKINS: Any other questions? Okay.

Group 7 is the SFE-20 Tank System. This was a tank that was used or was constructed in 1957. It was used until 1976 to collect decontamination solutions and other radioactive liquids generated within the 603 complex.

This is a tank located down by the 603 area. This being drain level; the top of the vault is below 10 feet. It's about a 640-gallon tank. It has about 400 gallons of liquid and an additional 535 gallon of sludge.

What we know is, we have some fairly significant levels of radionuclide contained in both the liquid and the sludge. Also, I should point out that in 1976, we went out and cut and

Page 29

capped the lines, basically isolated the system and abandoned it in place.

Also, what we know is, if we do nothing at some point the content of the tank will leak and eventually reach the environment, which could impact the aquifer. What we don't have a good handle on is actual concentrations, in that we have one round of sampling from 1984 that they looked at radionuclides and radionuclides only. As such, we would need to look at what the radionuclides would be and the chemical metals, organics, if necessary, also associated with this area.

Based on this, the agencies believe remedial action is warranted. This would allow us to prevent contamination of the aquifer. We looked at four alternatives. Again, No Action for comparison purpose. In Situ Stabilization with Containment, or Alternative 2, would essentially fill the facility full of concrete and stabilize the liquid, the sludge, and the tank structure in place. Alternative 3 would remove the liquid and treat it and then stabilize the structure, including the sludge, with concrete or some other grout. Alternative 4 would remove the liquid, treat it, remove the sludge, treat and dispose,

Page 30

then remove the structure, including the pipe and the vault and everything and then dispose of that.

AUDIENCE MEMBER: Question. Do you have a technology that is able to remove the liquid and the sludge that you feel confident about?

MR. JENKINS: Yes. I'll do it in two pieces. In the case of the liquid, prior to the cutting and capping of the lines, the liquid that was actually treated in the past, through the PEW system, in fact. As far as the sludge -- again, this is why I said we don't have a real good handle on the concentration. From the one sample result we have, the sludge may be -- it's right on the line of being TRU. If it was TRU, we would have to treat it and dispose of it at WIPP. In addition, it would be remote handled. Based on this, the agencies' preferred alternative is 4.

Any other questions on that one before I jump to the next group?

Okay. The last one I'm going to talk about is Group 6, which consists of two sites, site 84 and site 94. Site 84 is somewhere between 40 and 100 pressurized gas cylinders. Such things as acetylene cylinders, oxygen, and other welding gases. These were disposed of in the early '50s.

Page 31

In the winter of '57, '58, they washed out and were reburied. The other one, Site 94, consists of four tanks suspected of containing hydrofluoric acid. We do know from a site investigation around Site 94, the vegetation has been stressed.

AUDIENCE MEMBER: Site vegetation has been stressed?

MR. JENKINS: Dennis.

MR. RAUNIG: Yes. If you look at the cylinders -- and we have this photo up here. It's an example. I'm not sure if you can see it from the far side of the room, but things aren't growing right adjacent to the cylinders, so it's possible that the contents did release in that area.

AUDIENCE MEMBER: Are you only gathering that information anecdotally or are you doing some laboratory investigation of that?

MR. RAUNIG: Because of the safety hazards associated with this site, we haven't gone in and performed a sampling analysis there. We're, basically, going to do a removal action on it and at the time we would make that assessment. But there is some acute safety hazards associated with that site, so we roped off a few hundred yards in every direction to keep people out.

Page 32

AUDIENCE MEMBER: And wildlife?

MR. RAUNIG: Wildlife still has access to it, but it's been there for 35 to 40 years. And the contents -- the containers are high integrity containers, so if they have release, it's probably in the soil beneath.

AUDIENCE MEMBER: How about thermal change?

MR. RAUNIG: That presents a hazard. If, indeed, there is hydrochloric acid in there and the breakdown of the water in the carbon steel, you have hydrogen gas, overpressurization. That is the exact reason why the area was isolated.

AUDIENCE MEMBER: Thank you.

MR. JENKINS: Based on that, the other thing that we don't know -- and Dennis kind of touched on this -- we don't know how much pressure is left in the cylinders.

AUDIENCE MEMBER: Is there any radionuclides associated with these things?

MR. JENKINS: The gentleman in the back asked if there were any radionuclides associated. The answer is no.

MR. RAUNIG: We did some cursory rad monitoring in the area before we decided what was

Page 33

in the tanks, what we thought was in the tanks, indicating what might be in there. And we didn't get any detectable radiation with a problem.

MR. JENKINS: Based on this, the action, we believe a remedial action is warranted. This is to reduce the safety hazards associated with the site. We looked at three alternatives for this one. First one, again, No Action for comparison. The second one being a removal treatment of the contents and disposal of the cylinders. The third one being placing an engineered cap over each of those two sites.

Based on this, the agencies' preferred alternative is 2. However -- and I think that we've kind of touched on it, and that is the safety hazard dealing with pressurized gas cylinders. Any questions on this?

Well, at this point I'll turn it over to Scott Reno to talk about water.

AUDIENCE MEMBER: About how far is 84 away from the Big Lost River? How far away is it?

MR. RAUNIG: About 100 feet.

MR. RENO: Not very far. I think within 100 feet.

MR. JENKINS: It's not very far.

Page 34

AUDIENCE MEMBER: Could they be washed out?

MR. JENKINS: Could they be washed out again? Yes.

AUDIENCE MEMBER: I do have another question.

MR. JENKINS: That fine.

AUDIENCE MEMBER: I do have another question. I'm sorry. These senior moments just get me.

In several of the groups, 1, 2, 3, and 7, I've heard reference to soils and whatnot being taken to WIPP as an alternative; is that correct?

MR. PIERRE: Not exactly. What I mentioned was that the concentrations at certain parts of the Tank Farm soils were high enough that if they were excavated they would have to go to WIPP. 100 nanocuries per gram is their criteria for soils that would have to be managed in the Waste Isolation Pilot Plant. But at this point in time, the preferred alternative for the interim action in the Tank Farm soils is to reduce the infiltration by 80 percent. So we're not talking about excavating the Tank Farm soils at this time.

AUDIENCE MEMBER: At this time. So it

Page 35

would be -- if you had to select another alternative, then, which would become one of the --

MR. PIERRE: If we had an excavation alternative, and we picked the soil up, and it averaged over 100 nanocuries per gram on a 90 percent confidence, it would wind up in WIPP.

AUDIENCE MEMBER: And the same, then, with sludge?

MR. JENKINS: Yes.

AUDIENCE MEMBER: It has that potential?

MR. JENKINS: Yes.

AUDIENCE MEMBER: So has there been some forward thought about what would happen in the case that WIPP does not open?

MR. PIERRE: Right now the Advanced Mixed Waste Treatment Facility is going forward on schedule to take the material and process. If sludge came out of the SFE-20 and was greater than 10 nanocuries per gram, it would probably wind up going to the Mixed Waste Treatment Facility.

The output of the Advanced Mixed Waste Treatment Facility would wind up in the storage modules until WIPP or something like WIPP became available. So if WIPP doesn't open, there would be

Page 36

a lot of containers of WIPP-ready material in storage until something did open.

AUDIENCE MEMBER: So that sludge is really a big can of worms. It could be going in several different directions depending on what it turns out to be.

MR. PIERRE: Based on the uncertainty and lack of knowledge that we have, I know there was one report that the material was above 100 nanocuries, but what we will have to do is take it out, sample it, and then go wherever it's required to go at that point. It's not going into the INEEL CERCLA disposal facility.

AUDIENCE MEMBER: Thank you.

AUDIENCE MEMBER: Just one more. Do you have a clarification of what the state planning is for the INEEL CERCLA Disposal Facility as far as location and any time frames estimated, things of that nature?

MR. JENKINS: Right now we're still in conceptual. Depending upon what we eventually take for the Group 3 soils. We may or may not construct it. If we construct it, it would be located at the Chem Plant. The area that we're looking at is the area around the perc ponds and including the perc

Page 37

ponds. There is kind of a conceptual drawing over here. Did I get your whole question?

AUDIENCE MEMBER: Yeah, I think you did. Basically, it's still conceptual, but there is no time frames on development at this point?

MR. JENKINS: No. Again, depending upon if we were to sign the ROD -- well, depending upon if we picked it, that would establish what the time frames would be.

MR. PIERRE: It's statutory for substantial on-site physical remedial action within 15 months of a Record of Decision for a signature.

AUDIENCE MEMBER: The ROD is generally expected to be approximately --

MR. PIERRE: June, July.

AUDIENCE MEMBER: '99. The waste and soils and whatever that potentially would go to this location would be below the TRU levels that would be shipped to WIPP or otherwise?

MR. PIERRE: Yes.

AUDIENCE MEMBER: Does this also comply with those portions of the Governor's Agreement concerning the removal and disposal of waste from the site?

MR. PIERRE: There are two parts. One

Page 38

has to do with if it's above 10 nanocuries per gram TRU, it's not going to be disposed of on INEEL. That is Item No. 1. Item No. 2, my understanding of the Governor's Agreement is that the Governor's Agreement in part endorses the Federal Facility Agreement and Consent Order and its implementation. This material that we're talking about -- unless you're referring to -- well, even the SFE-20 wouldn't classify as high-level waste. And we're not talking today about excavating the Tank Farm soils, which would potentially be a different issue. So the soils that we're talking about primarily, they may be mixed waste, but the contaminants of concern are primarily constituents like cesium and strontium.

AUDIENCE MEMBER: WIPP is for TRU waste?

MR. PIERRE: Right. WIPP can only accept material that is above 100 nanocuries per gram. That is our confidence level. The reason I say that is that, by measurement, it may be 60 nanocuries per gram measurement in order to assure that it's 100 for confidence.

If it's above 10 and below 100, it would have to be treated and processed. In other words,

Page 39

the only choice that you have would be below 10 or above 100. That is where the BNFL or the Advanced Waste Treatment Facility comes in or Pit 9, which is also in the same situation.

AUDIENCE MEMBER: But the cesium and strontium would not be subject to the Governor's Agreement but rather the Federal Facility's Agreement.

MR. PIERRE: Right, which is referenced in the Governor's Agreement.

MR. JENKINS: Any other questions?

MR. RENO: Those are good questions. Thank you.

I'm going wrap up the last two groups on this, which is the perched water and the aquifer. And that should complete our informational phase of the meeting. Our real purpose in being here is to see what you think of the plan and to listen to your concerns and comments. So following this quick overview of these last two groups, I'll turn it over to Erik, and he will facilitate the question and answer period.

Really, the key to understanding how the contamination moves at the Chem Plant is understanding how the water moves. The water

Page 40

solubilizes contaminants that have leached down from the surface and then enables it to move throughout the zone between the surface and the aquifer, and, to a certain extent, into the aquifer itself.

To give you a quick overview of what the subsurface consists of, this is the upper 40 to 60 feet, primarily sands and gravels. And then there is 60 feet to 110 feet which is primarily fractured basalts. So at 110 feet we encounter our first significant zone of perched water.

What is perched water? Perched water can be thought of as water that is migrating down from the surface through very porous media. Then it comes to a zone or a layer, if you will, of much tighter grain material that does not allow it to move as quickly, and the water, if you will, ponds within these pore spaces.

The next significant zone of perched water occurs after another 30 feet of fractured basalt. This is 140 feet. And then we have more fractured basalts down to 380 feet below the ground surface to 420 feet. We have a sandy layer sandwiched between some clay zones that we have a significant perched water zone there. And then the

Page 41

regional aquifer, the Snake River Plain Aquifer, is 460 feet in depth.

The thickness of the aquifer is about 250 feet. There is a layer in the middle of that aquifer, about 100 feet into it. There is a sedimentary layer of much less permeability.

Here you see the former Chem Plant Injection Well. I want to point out from this picture that that well is no longer in service. We will talk about that a little bit more in a moment.

AUDIENCE MEMBER: A quick question. Could you characterize the water quality of the aquifer itself in terms of primary drinking water standards?

MR. RENO: Yes. I'll cover that in just a moment. That is upcoming. Also we've got quite a bit of characterization data about the water quality in the perched water itself. The contaminants that we're detecting in the perched water include technetium-99, nitrates, neptunium-237, tritium, and strontium-90.

And as a comparison -- there are fairly high concentrations of radionuclides in these perched water bodies. That is the more mobile

Page 42

nuclides. For instance, the strontium-90, the maximum concentration we're seeing is on the order of 500,000 picocuries per liter. By contrast our drinking water standard is 8 picocuries per liter.

We don't expect this to be a source of drinking water in that when the man-made sources of water that make up these perched water bodies, the man-made sources are gone sometime in the future, we don't believe there is enough contribution from the natural sources alone to create a usable water body for drinking water purposes.

However, this perched water does recharge the Snake River Plain Aquifer. We do believe that there is an ongoing contribution or loading to the aquifer of some surface contaminants that is being carried down with the perched water.

The sources of water are important. The primary source of recharging perched water bodies is the plant's percolation ponds or surface waste water disposal system. These went on line in 1984 to replace the injection well when it was taken out of routine service. And they receive on the order of 1 to up to 2 million gallons of waste water per day into these ponds. That is 690 million gallons per year.

Page 43

The second largest source of water that contributes to this zone is the Big Lost River itself. But that contribution is highly variable because the river is an intermittent stream as it flows past the ICPP. If we looked at one of these maps here, this jog in the fence right here on the northwest corner of the Chem Plant is actually so the river channel can go past the facility.

The river only runs about every third year on average. Recently we have been in a wet pattern. The river ran year-round last year and ran the year before, and the year before that. But we think that the average contribution is somewhere between 100 million and 200 million gallons per year.

The contribution from natural snow melt precipitation, in the contaminated areas, the area of concern is on the order of about 4 million gallons per year. The sewage treatment plants contribute between 25 and 30 million gallons per year. And then we have another 2 million gallons a year from lawn irrigation, another 12 million gallons a year from leaking fire water lines. And, lastly, the plant's heating system is the coal fired of the plant that creates steam to heat the

Page 44

facility which has some shallow dry wells, but they discharged the steam condensation into them, up to 4 million gallons per year that goes there.

Now, we know that this water is carrying contaminants to the aquifer. What we don't know for sure is, how much of this water do we need to eliminate from recharging this zone to stop a significant impact to the aquifer from occurring? We think a phased approach to looking at this problem is the most appropriate. That would be to start at our most significant source of recharge, that being the percolation ponds, and try to remove that source of water, finding alternate means of disposing of plant surface waste water.

Our objective is to stop the strontium-90 from reaching the aquifer, to allow the aquifer to reach a usable state or return it for beneficial uses within 100 years, and then to minimize the man-made sources to recharge.

So the first alternative is the No Action Alternative. The second alternative would be to begin this phased approach at removing these recharge sources. And then the last one, we would look at removing these sources of recharge one by one and letting the water that is in the

Page 45

sub-surface drain out, but, at the same time, implementing a more aggressive contaminant removal pump and treat approach.

The difference in cost between the two is the difference of between 20 million and $260 million. This $260 million is for the Alternative 3, the pump and treat. Now, why? We didn't feel with the additional expense it gave us a value added. There are a couple reasons. If you got a swimming pool that drains to the deep end, you can stick a pipe down in the bottom of that and pull all the water out of the pool eventually.

These interbeds, where these perched bodies are located, are probably undulating similar to the lava flows that you see out in the desert and to get a well in all the little pockets and all the other little interspersed areas, where perching may occur outside of our big significant zones, is going to be very difficult and probably -- I mean, it would be unrealistic to recover all of the water.

The second issue is these contaminants have an absorption coefficient associated with them. For instance, in the case of our strontium-90, its sorption coefficient is between

Page 46

12 and 24. That means that 1/12th of the contaminant, strontium-90, is present in the water. And 11/12ths, or up to 23/24ths is absorbed to the soils themselves. So even if you pump all the water out, you still only remove between 5 to 10 percent of the total contaminant from the subsurface.

Therefore, we do not feel that we wanted that as a preferred alternative and picked Alternative 2, a phased approach to eliminating the recharge sources and letting the perched water drain out and the contaminants to decay out in the vadose zone that has been dried out, if you will.

AUDIENCE MEMBER: A question on the perched water and the other identified kind of map of the subsurface geology, if you will. Now, that has come largely as a result of monitoring wells, what we know about that; is that correct?

MR. RENO: That's right.

AUDIENCE MEMBER: So beyond that we're estimating what is down there based on, hopefully, strategically placed monitoring wells.

MR. RENO: That is correct. We attempted a timed domain, electromagnetic survey, we beamed with the beam, radio signals down to

Page 47

bounce off these interbeds but it was not really very successful in identifying and further delineating perched water bodies.

AUDIENCE MEMBER: The perched water bodies that you are talking about are the ones that -- are these directly beneath the ICPP or are we talking the site-wide perched water?

MR. RENO: Thank you for asking for that clarification. These are perched water bodies which are directly beneath the ICPP or the INTEC Facility. And they are capable of carrying contaminants released to the surface soil from this facility to the aquifer.

Our modeling indicates that if the percolation ponds alone were taken out of service, that it would be much more difficult for these interbeds to receive enough water to reach a saturation point, so that processed water is the largest source of our problem. The model also indicates that if these percolation ponds were no longer in service and that the production wells that are currently at the Chem Plant were no longer in service, that the aquifer would naturally attenuate to drinking water or to meet drinking water standards 100 years from today. All right.

Page 48

Clarification? Should I continue on or do you want to go back to this?

AUDIENCE MEMBER: I have a couple more questions.

MR. RENO: Go ahead, Pam.

AUDIENCE MEMBER: I'm looking at this schematic, and I'm asking about the geology. Do you have an estimate of the acreage or the cubic feet or the amount of volume that we're talking about?

MR. RENO: Of how much water is there?

AUDIENCE MEMBER: Not the water, but the soil and the water and the rocks.

MR. RENO: Well, the Chem Plant Facility is 88 acres.

MR. JENKINS: The area of the Chem Plant is around 250 acres, fence to fence, and from there down to the top of the aquifer is 460 feet.

AUDIENCE MEMBER: So I get a picture of it. The second thing is not a trick question. I'm not intending to put you on the spot; I'm just really curious. In terms of the cost, has anyone performed an economic model that would tell us what the cost would be if we lost the use of the aquifer to agriculture, sports, people drinking water and

Page 49

living here, eating food, that sort of thing?
MR. PIERRE: One of the things is -- when Scott goes into the Snake River Plain Aquifer, and it may be better if you wouldn't mind to wait until he does, because one of the issues is, where is the contamination? What are we trying to protect? What we are trying to protect is the area within INEEL and it may be easier to answer that question at that point.
MR. RENO: Right. I think we'll show it's probably a moot point, but I understand the concern. And, obviously, that aquifer is of an immense importance to the region and to the people, and protection of the aquifer is a very high priority.
So let's talk about what the contamination in the aquifer consists of or arises from, the disposal practices at the Chem Plant. From 1952 to 1984 an injection well was utilized to dispose of the plant service waste. If we look over on this map here, there is kind of a conceptual drawing of what that might look like.
It was 598 feet deep. The top of the aquifer is 460 feet. And over that period of time, one and a half to 2 million gallons of waste water

Page 50

per day went down the well, for a total of 11 and a half billion gallons of waste water. In 1989 the well was permanently sealed shut. A contractor was brought in that dropped detonation cord down the well, blew up the casing, and then pressure grouted things from the top of the aquifer to the surface at 300 pounds per square inch of concrete. So it's not going to be used again.
However, the contamination that we have in the aquifer is largely from injection. But, as I say, we also have some migration from the surface through the perched water.
AUDIENCE MEMBER: Do we know how much radioactivity -- how many curies of radioactivity were actually injected?
MR. RENO: Prior to 1961 the records are not real good, but we do have an inventory of what went down the well on a monthly basis from '61 on, and then the discharges prior to '61 were kind of back calculated. It was on the order of 23,000 curies of tritium and 7,000 curies of strontium-90 over that period.
There were also some minor amounts of some other contaminants that went down the well. We had some mercury that went down the well in not

Page 51

a large amount, you know, pounds. And in 1974 a half a curie of plutonium was disposed of through the well.
AUDIENCE MEMBER: Any iodine?
MR. RENO: About one curie of iodine.
AUDIENCE MEMBER: What is the date of the last tritium injection; do you know?
MR. RENO: 1984 was the last routine use. There were a couple incidents. There where some upset conditions or something where a small -- a couple thousand gallons or whatnot went to a drain that fed to the old well between then and 1989. And I assume there would have been some concentrations of tritium within those. There is some tritium, but less than drinking water standards, that is currently discharged to the percolation ponds themselves.
AUDIENCE MEMBER: What are the quantities of strontium and cesium again, please?
MR. RENO: Very little cesium went down the well. I don't have an exact number on the total curies of cesium-137. But there was some, but the main contaminant was strontium-90, and it was on the order of 7,000 curies. It's also important to note that much of this has decayed

Page 52

over this period of time. I will go into that a little more in a minute.
AUDIENCE MEMBER: What happens with the water in the percolation pond? Is it treated from there? I'm unclear.
MR. RENO: Well, the percolation ponds have effluent limitations. They are subject to their current Waste Water Land Application Permit. The total dissolved solvents and total chlorides that go on nonradioactive are slightly above the secondary drinking water standards, which are primarily there for aesthetic qualities for water rather than a toxicity.
And the percolation ponds, their current permit is only valid through the fall of the year 2000. And given that we have a new groundwater quality rule that was promulgated in Idaho in 1987, were that permit to be reissued, there would probably need to be some type of pretreatment that was done to meet that rule. That would be addressed, the total dissolved solids in the chloride.
It still looks like you're a little bit confused. Did I answer your questions?
AUDIENCE MEMBER: I'm unclear on what

Page 53

kind of waste water is in there. I mean, how contaminated is the water?

MR. RENO: I'm sorry. It's primarily cooling waters that have cooling coils that have gone around the high-level waste tanks. It's an isolated system that goes through heat exchangers and whatnot. And there are various plant processes require cooling, et cetera.

MR. RAUNIG: Maybe I can clarify that -- to state that it meets the drinking water standard with the exception of the chloride, otherwise, it does meet MCL water that goes into the perc pond.

MR. PIERRE: Was your question, why was it radioactive? In other words, what are they doing there?

AUDIENCE MEMBER: No, my question has been answered.

MR. RENO: All right. This is the strontium-90 plume. If you've been out at the INEEL, this is the Central Facilities Area, which is about 3 miles south of the ICPP. This outside line here corresponds to the 8 picocuries per liter strontium-90 contour.

This slide is the tritium plume. Again,

Page 54

about 3 miles south of the Chem Plant is the Central Facilities Area, and this outside line corresponds to the area. If you're looking out of an airplane, this is the area where the water within that line is greater than the drinking water standard of 20,000 picocuries per liter.

Now, what is interesting about the strontium-90 and the tritium plumes, since the injection well was taken out of routine service in 1984, these two plumes have been moving back -- or this contour line has been moving closer back to the Chem Plant.

The mechanism that is allowing that line of that area that exceeds drinking water standards to move back is dissolution, dispersion and radioactive decay. Now, the radioactive decay is happening relatively quickly for the strontium-90 and the tritium. The tritium has a 12.3 year half life, and the strontium-90 has a 20.1 million year half life.

Now, the third radionuclide contaminant of concern that we have in the aquifer has a little different problem. That is our iodine-129. It has a 15 million year half life, which gives us a long-term persistence problem.

Page 55

Fortunately, there was not very much of it that was disposed of in the aquifer. This is the measured concentrations that we have today. This line corresponds to the area that exceeds the 1 picocurie per liter drinking water standard. The highest measured concentrations that we've had, were here, and there is another well up here that were between 3 and 4 picocuries per liter.

AUDIENCE MEMBER: Were the black dots monitoring wells?

MR. RENO: Yes, they are.

AUDIENCE MEMBER: I was going to ask you the same question from the question. What has its track record been? Is it moving forward, moving back?

MR. RENO: The iodine plume?

AUDIENCE MEMBER: Yeah, the iodine plume.

MR. JENKINS: It is dispersing. It is moving back but not nearly as fast as the other ones.

MR. RENO: And the mechanisms are dissolution and dispersion. It is a fairly mobile contaminant.

AUDIENCE MEMBER: I don't have much of a

Page 56

feel for what kind of volume of water are in this aquifer. What kind of gallons per minute are in the wells?

MR. RENO: That is a good question. Basically, you can pull a lot of water out of this. I have been told that the production wells at the Chem Plant will pull up to 3,000 gallons per minute with only about 2 feet of draw down.

AUDIENCE MEMBER: 3,000?

MR. RENO: Yeah. So you can pump a lot of water. The volume of water over the whole aquifer, you know, that is, stretching from St. Anthony out towards Hagerman and Bliss, I have been told it's on the same order of the volume of water as Lake Erie. So we're talking about trillions of gallons or millions of acre feet. Okay? And it is the sole source of drinking water to the people in the area. There are four contaminants of concern. The three radionuclides that we talked about and then the mercury.

Now, what do we think is going to happen with this iodine? We built a fairly complex fate and transport computer model to estimate the impacts to the future. And that was put together -- input from the state and from EPA and

Page 57

from the Department of Energy.
The iodine plume, the model indicates that it will come right near the INEEL boundaries. And that this will be over the next 30 years or so. And from there, that that contour line corresponding to one picocurie per liter will, again, start to move back toward the Chem Plant due to dissolution and dispersion.
There has been trace quantities of iodine that has been measured out on the front end of this plume, 16 miles from the point of discharge, the injection well, which is eight and a half miles past the INEEL boundary. It has been detected using a very specialized analytical technique, the mass spectroscopy. There are only two labs in the world that can do this. One is at the University of Waterloo in Canada and one is at Purdue University. And they are literally counting atoms per liter. So the concentrations they are seeing off site are well below any risk-based level of concern or drinking water standard. Within the site boundary, the modeling says without taking action that we will probably not be able to expect the aquifer to be available for future beneficial uses within 100 years within the INEEL boundaries.

Page 58

Okay. I want to make another point. I failed to mention when I talked about the receding tritium and strontium-90 plumes, we feel that that trend of the moving closer to the facilities has slowed because of the continuing migration or flux of contamination through the perched water and that it's starting to reach somewhat of a state of equilibrium and will not be receding as quickly as long as that perched water is present. Okay.
Now, what to do about this? We asked our computer model what is the highest concentration of iodine-129 that we can see in the aquifer today and be confident that we will not have a problem 100 years from now and that this aquifer will be available for other uses.
The model says that number is 11 picocuries per liter. Now, what I pointed out before, the well that had 3 to 4 picocuries per liter in it. That was over an open interval well. There may be zones or depths within that well that have higher concentrations of iodine that are mixing with relatively cleaner water. So we want to be sure that our modeling assumptions are correct. So we're proposing to put in five wells in the aquifer in the area where we think the hot spots are and to monitor those wells at intervals down to the bottom of the aquifer under 15 meters long. If we find a layer or a zone in there that exceeds this action level, the 11 picocuries per liter, that would lead us into a contingent active remediation approach. We would begin treatability studies to look for appropriate treatment technologies and find a way to try to target this hot spot and in this contaminated zone. That is our Alternative 2B.

Page 59

The other alternative that we evaluated was a requisite No Action Alternative. Alternative 2A, which is simply to monitor it and watch it decay away without a contingent remedy and source control and ensuring that this recharge to the aquifer problem is taken care of.
Again, Alternative 2B, Institutional Controls with Monitoring and the hot spot active remediation. And the third alternative would be more aggressive, maybe, a more traditional approach to pump and treat, and that would be to pump over the volume of the entire aquifer.
The difference in cost -- this is a $783 million alternative. And our Alternative 2B is 20 million. I want to point out that there is an error on page 35 of the proposed plan. The table says 35 million, but the side bar has the correct value in that, present value dollars of 20 million. Clear?

Page 60

AUDIENCE MEMBER: Now, all these various alternatives, et cetera, will be continually revisited, though, throughout the life so at some point should data indicate, then you would perhaps move to one of the other alternatives or more aggressive?
MR. RENO: Right. Our costing information, we looked at monitoring the aquifer for 100 years. But for all practical years, it will be monitored in perpetuity the best that can be achieved. And our Records of Decisions are also subject to review no less frequently than every five years. We would have to look at the data from that monitoring to ensure that our remedy is effective.
AUDIENCE MEMBER: I want to say thank you very much for the presentation on the iodine.
MR. JENKINS: I think your question from earlier is, what was the economic impact of the aquifer restoration.
MR. PIERRE: Is that your question now?

Page 61

AUDIENCE MEMBER: No, that is not my question. Just give me a couple, Scott --

MR. RENO: Let me go over a couple things and if it comes back, you let me know.

All right. We want to hear what you think. You can provide written comments back here at the table or we'll go through a question and answer session here, and then there will be an opportunity for you to provide any comments for the record that you would like to address.

The comment period, as Erik said, is going to end on December 22nd, 1998. We expect to have a Record of Decision sometime next summer and to begin work right away on designing these remedies. Okay.

AUDIENCE MEMBER: One quick question. How do the different agencies, EPA and DOE and the Idaho Department -- is this document -- is this going to be a ROD signed by all three agencies and reach consensus?

MR. PIERRE: That's correct.

AUDIENCE MEMBER: I remembered my question. This is a quickie, I think. In reference to the model that you use for the iodine, did you bring into play any kind of unusual

Page 62

situations such as change in the earthquakes and ice ages and so on?

MR. RENO: Well, we didn't go do the ice ages. We did do a sensitivity analysis upon the model. I mean, we asked what if the speed that the iodine moves with the water was different than what we think it is. We generally use fairly conservative numbers. I think the monitoring, hopefully, will bear that out. But we also asked the question: What if we had a monitoring well that let water run down the casing from the upper perched water body to the lower perched water body, what would happen then? Those types of things are in the RI/FS report. We can go over them. I have a slide out in the truck if you want to get into it in that much detail.

MR. PIERRE: We're also talking about a short restoration time frame in terms of the commitment here. You're looking at ice ages or volcanism, we're committed to restoring the aquifer within 100 years, not wait and see what happens.

MR. SIMPSON: Pam, Fritz, and Steve, would you mind if we took a break now and we'll come back and have more questions.

AUDIENCE MEMBER: How long?

Page 63

MR. SIMPSON: Let's go 10 minutes. Come back at about a quarter till.

MR. PIERRE: I was going to finish off with the Federal Facility Agreement and Consent Order that we have, almost all of the environmental recollection work being done pursuant to either interim actions or final actions under Records of Decisions, so the public process, the administrative record, the agency commitments are all there. As a matter of fact, the removal actions that DOE have been doing have been minor in comparison to other DOE facilities.

MR. SIMPSON: Okay. Let's come back about a quarter till.

(Recess.)

MR. SIMPSON: We're going to go ahead and start the question and answer where I guess you can fire more detailed questions at the panel up here.

I will mention that we will stay as long as you guys want to discuss this.

MR. PIERRE: Pam, do you want your question as far as economics now?

AUDIENCE MEMBER: No, actually I would like to pose that question even on this model.

Page 64

What is the cultural aspects of the EIS on there and not try to handle it tonight.

MR. PIERRE: One of the things that -- what we're committed to do, as I mentioned earlier, the threshold criteria, that is protection of human health and the environment and compliance with the law, we must comply with the substantive requirements of applicable or relative and appropriate requirements, therefore, we must achieve aquifer restoration within a reasonable time frame. We have with public input used a number of 100 years for what is considered a reasonable time frame. So there isn't a cost benefit analysis to us, it's we have to achieve it. As far as loss of ecology and potential damages, as you know, that is another subject with the trustees and not in what we're doing.

AUDIENCE MEMBER: Could you rank each one of these waste area groups in terms of how critical it is? Just more or less which ones are the most important.

MR. JENKINS: I would say the aquifer is No. 1. The perched water, it contributes to the aquifer, so put that No. 2. And then the Tank Farm, No. 3, and probably surface soils beyond

Page 65

that.
AUDIENCE MEMBER: Will that be considered in allocation of funds and the time and all that?
MR. JENKINS: Yes.
MR. PIERRE: Well, the federal agencies should not -- it's called Anti-deficiency Act, they should not be signed up and committing themselves to funds that they do not have. At this time we expect to have sufficient funds to implement this Record of Decision.
AUDIENCE MEMBER: Where is this funding coming from?
MR. PIERRE: Congress.
AUDIENCE MEMBER: What if Congress doesn't allocate these funds?
MR. PIERRE: Congress has the choice to reduce the funding. If they do, then we would prioritize, as the gentleman indicated.
AUDIENCE MEMBER: What kind of lobbying efforts are you looking at?
MR. PIERRE: I had worked for the federal government. I do not lobby. No lobbying efforts to date.
AUDIENCE MEMBER: None from the

Page 66

department whatsoever, there is no lobbying?
MR. PIERRE: Executive branch agency cannot lobby Congress. The state has influence over Congress, obviously. Now, Governor-elect Kempthorne has influence.
At this point in time, we do budgeting on a two-year cycle. So what we're looking at is we already know what the budget for the year 2000 is going to look like, based on discussions with the Office of Management and Budget, et cetera, at this point in time. In the last several years the Department of Energy has been on what is relatively flat funding so they know there is a certain amount of money that they are expecting to receive for Environmental Restoration. We have been prioritizing that money and trying to apply it to where it can do the best good. That is something that is under consideration.
The budget plans, Talley, you may want to talk that. It does take into consideration the ability to implement.
MR. JENKINS: What we -- well, I guess to describe our budget approach as Wayne said, it's on two-year cycles, in that starting in the January, February time frame we'll actually be

Page 67

putting together what the request will be for 2001. In the meanwhile what we have is a baseline in place, which basically is a projection of current year work plus out-year work. And from that baseline we'll roll up what the request to Congress will be, in that we actually try to schedule the work ahead of time.
Did I answer your question?
AUDIENCE MEMBER: In part. Typically, does Congress fund what you're requesting, and what percentage do they fund?
MR. PIERRE: In recent years they have been funding, as I said, DOE pretty much on a flat basis. If you were to go back about four years, that is when DOE was taking like 30 percent hits of what they were asking versus what they would get, so the requests are now much more realistic within the expectations of -- Office of Management and Budget pretty much identifies what your expectation should be and your requests are in that area.
Keystone, the Federal Environmental Restoration Advisory Committee -- do I got it, Dean?
MR. NYGARD: Dialogue committee.
MR. PIERRE: Dialogue committee had

Page 68

several meetings and put out a number of documents, and one of the recommendations would be if Congress does choose to underfund a project at the facility like the Department of Energy, Idaho, we would then look at the monies that are available and try to apply them across the board. We have been doing that over the last several years because there has been hits of 10 percent at least in the last couple of years. And it's called value engineering. We take a look at the estimated cost that we have for this project, 175, and see where we can meet the same objectives but do it in a more simple or more economic way. And we have been living with that for the last decade.
AUDIENCE MEMBER: There has been discussion in the Governor's Agreement and the federal facility compliance issue. Scott, could you summarize what the state's regulatory role is at INEEL, both in terms of enforcing the existing agreements and ongoing regulations of facilities?
MR. RENO: That is a good question. The Chem Plant, it's regulated under three major agreements with the state. The spent fuel activities are governed by the settlement agreement. The RCRA activities are administered

Page 69

through the FFCA, the Federal Facilities Compliance Agreement and the Site Treatment Plan and then the clean-up activities where releases that have actually occurred are performed under the Federal Facilities Agreement and Consent Order with U.S. EPA, DOE and the state as the signatories of that document.

There are a number of processing facilities that are under Resource Conservation Recovery Act interim status, permit application. And we have two Waste Water Land Application permits there, one for the sewage treatment plant with the percolation ponds, and there are seven air permits, permits to construct the facility.

AUDIENCE MEMBER: Would the state have a role in the proposed conceptual new disposal facility and what would that role be if so?

MR. RENO: Well, the facility that is being proposed is to address soils subject to the Federal Facilities Agreement, that is, environmental restoration only, INEEL only, that is, no out-of-state, no off-site soil and debris. If there was a proposal to manage some other types of regulated waste out there, then that would need to be done pursuant to some other application, the

Page 70

review process that it will not be addressed for this Record of Decision and for this facility.

MR. PIERRE: One of the things that we do at the federal facility and consent order that is not common at any of the other DOE facilities now, it is a three-way team approach, so it's not here is the stakeholders and EPA's goal and DOE does the work. It's a three-way process. The remedial design, the remedial action work plan, the oversight of the work is done by all three agencies. And that's the team approach that we've developed since '91, and has been implemented since '91.

AUDIENCE MEMBER: Have the contracts for clean up been prepared?

MR. PIERRE: No. We are in a proposed plan. We think these are good alternatives. We need your input.

AUDIENCE MEMBER: So you guys haven't thought about who is going to be contracted to do this?

MR. JENKINS: As far as -- we don't have any contracts or RFPs or anything being written at this point. We would go through the process of the proposed plan and public comment as we are now,

Page 71

followed by writing a Record of Decision. At that point it would be Lockheed or whoever the next contractor would be, would be the actual one letting out the contracts or preparing the RFPs.

MR. PIERRE: As Talley was just leading into, the Department of Energy is in the process of developing requests for proposal for a new management and operations contractor for the entire facility. That will be on the Web page, and the address is too long for me to remember.

Erik, if you can maybe tell people, I'll give it to you later but I don't remember it this second. It starts with an EPA dot com.

The point is that January 20th is the -- December 5th the draft RFP should be available on the Internet and they are looking at January 20th of putting the requests for proposal out. That would establish the overall contractor whether that contractor is selected to subcontract or try to do the work in house would depend on the capability of the contractor.

MR. JENKINS: Did you want to add something, Woody?

AUDIENCE MEMBER: No.

MR. JENKINS: Do you know the address?

Page 72

AUDIENCE MEMBER: I was looking to see if I had it. I don't.

MR. JAMES: Wayne, it was also depend on the Davis-Bacon Act.

AUDIENCE MEMBER: So that Internet site will have the contracts available for public review at some point?

MR. PIERRE: No. That Internet site will have the requests for proposals that will be going out soliciting from various contractors if they want to bid on being the contractor. DOE ID is supposed to select the contractor in September -- or by September, I should say. You have to have it in place by September of '99. This record of decision, we would expect to be around June or July of the '99. So after you sign a Record of Decision, the process would then go that we would develop the scope of work. From the scope of work would become a remedial design, from remedial design would go to a conceptual or 10 percent design or 30 percent design to 90 percent design and from that you would have a remedial action work plan. I just described about two years of work. So the contract would be well in place before we had to build something.

Page 73

MR. JENKINS: Did we answer your question?
AUDIENCE MEMBER: So then, once all that work has gone through, are the contracts available for public viewing?
MR. PIERRE: Parts of them are. It depends on the confidentiality.
MR. RENO: Let me introduce these other members. We have Bob Nitschke, who is with Lockheed Martin Idaho Technologies Company. He's the risk assessment guru for them. And Susan Evans also with Lockheed is a hydrogeologist, and Bob James is the project manager for this effort with Lockheed.
MR. JAMES: I'm not the a contracting expert so I will have to answer it in layman's terms, but subject to the FARs, the Federal Acquistion Regulations, and I believe there is a confidentiality condition until such time as the contract is let. I think all proposals remain confidential except the successful bidder, and that, I believe, becomes part of the public record. Is that your understanding, Wayne?
MR. PIERRE: Yes. So I guess the short answer would be sometime in the '99 to 2000

Page 74

transition time that should be of public record.
AUDIENCE MEMBER: My first question is going back to Group 1 and that's an interim plan --
MR. PIERRE: Interim action.
AUDIENCE MEMBER: What are the triggers for to you decide to move for another alternative? What specifically would be the triggers?
MR. RENO: Just a clarification, Pam. This would be the triggers to change the short term or the interim remedy or the final remedy?
AUDIENCE MEMBER: The short-term interim.
MR. PIERRE: One would be, do you see another alternative than the three that we've identified that would meet the objectives. We stated what we thought the risk was. We also stated what we know we don't know, and at this point in time we think that we should be doing something to minimize the percolation of contaminants to the Snake River Plain Aquifer. What we are proposing is to take actions to achieve a goal of about
80 percent.
Those actions are not defined in the proposed plan, just the objective of doing them.

Page 75

But it would include things like surface sealing and some sort of embankments or berming to prevent flood water from running on. We, at this time, just don't see a fourth alternative. But if you do, and if it meets the objective better than the third alternative, then that would be the way that we go. So it's not exactly a decision table, but if we have the nine criteria and what best fits those criteria is the direction that we go in.
AUDIENCE MEMBER: Another question is I would like to have some discussion about the percolation pond. If I'm grasping the information that's in these reports, they have a huge bearing on a number of these. Now, they are scheduled to continue with the permit until -- I think it's a Scott question.
MR. RENO: I believe it's September of the year 2000 is when the existing permit is up for review. In the interim, no decision has been made on what to do with these ponds. We think that we need to do something. Lockheed Martin, as we speak, I know for their permit review -- their current permit review has a study going on to look at alternatives to replace these ponds or find some other methods of dealing with their waste water

Page 76

that won't recharge perched water bodies. We will set forth a schedule in our post-ROD documents on when these activities would occur, and that may not necessarily be governed by their current permit time frames.
AUDIENCE MEMBER: So DOE owns these, runs these? Who is the -- where is the DOE guy?
MR. JENKINS: Here.
AUDIENCE MEMBER: Okay. So do you have a work plan for decommissioning these or moving them somewhere else?
MR. JENKINS: As Scott kind of touched on, the current permit would expire in September of 2000. If, for instance, let's say we were to continue to reuse these, we would have to reapply for a permit, which we would go through the state to get the permit. And Scott kind of touched on we're looking at other options at this point. Those could range anywhere from new perc ponds to complete recycle of the water or grouping or pieces of each within there.
We're planning to have some kind of analysis pulled together to support the upcoming -- as I kind of touched on earlier, we need to make our request for funding in the January or February

Page 77

time frame or start pulling that together. So what we're really doing is trying to pull together what to do with this water over the next couple months together. At this point we don't know what we will do.

However, if we don't use the perc ponds, which I think the three of us support that we need to turn them off, if they're turned off -- and for Group 3, the decision was made to construct the repositories. Those ponds would be part of the repository area in that we would construct cells within there.

MR. PIERRE: The key is that we feel that it is necessary to stop the recharge to the perched aquifer. Those perculation ponds represent a large fraction of that recharge and they will not -- one way or another, they won't be operating where they are. Either there will be new perc ponds or there will be different discharge or there will be better economies for water usage. But the perc ponds will not continue operating if the Record of Decision is signed.

AUDIENCE MEMBER: Are the perc ponds now presently operating within parameters of the permit?

Page 78

MR. RENO: Yes, to the best of our knowledge. There is monitoring data that is available which indicates that they are meeting the terms.

AUDIENCE MEMBER: Are you monitoring those or is DOE the monitoring them?

MR. RENO: I believe it's Lockheed Martin does the monitoring for the Department of Energy. And they do submit reports to the state.

Bob, do you want to elaborate on that any farther?

MR. JAMES: Are you talking about the kinds of samples?

MR. PIERRE: Do you know the frequency of the analysis?

MR. JAMES: I don't know the frequency of the analysis.

MR. PIERRE: None of us are -- this is one of those situations where you have an operator facility, and we have a necessary remedial action, and so we're faced with how do we minimize the blow to the operating facility but still achieve the interim action.

We had a similar situation with the Warm Waste Pond years ago where we needed to take that

Page 79

out of service and a new pond was constructed. So it's similar. And it's under a compliance program, and this group, really -- if they are not complying with the permit conditions, they should be penalized. That is the simple attitude of the people here. None of us have checked on that.

AUDIENCE MEMBER: My last question about the perc ponds is, when the repermitting process or the new permitting process occurs, is there an opportunity for public participation?

MR. PIERRE: There are two ways to deal with the water if they are continuing to produce water discharge. One is the discharge under National Pollution Discharge Elimination System, the other one to a land app. For a National Pollution Discharge Elimination System, the answer is, yes, there is clearly a public input process. If anyone in the audience knows, I just don't know the land app situation.

AUDIENCE MEMBER: I think there is a public involvement in land application process. We have not had any in the past, but I think there is an open process also.

AUDIENCE MEMBER: Thank you very much.

AUDIENCE MEMBER: Along the lines of the

Page 80

permit, didn't either one of you say earlier if they needed to be reinstated that they wouldn't meet qualifications? Am I wrong there?

MR. RENO: The existing permit was issued in, I believe, September of 1995. At that time it was operating under the Idaho Water Quality Standards and Waste Water Treatment Requirements. And in April of 1997, a new Ground Quality Water rule was promulgated in Idaho, which had a little more stringent requirements on impacts to aquifers and that is a factor into the permit.

My understanding -- I don't make the decision, I'm not the permit writer, but my understanding, the existing effluent to that pond probably cannot meet the requirements of this new rule and will probably require some form of treatment, so it's a good question; you're right.

MS. EVANS: Up until a few weeks ago I was Bob and Bob was me, so we changed positions. We've been evaluating -- we've got a group of engineers evaluating treatment options to do those upgrades so we can meet permit conditions when a new permit is needed. It's not like we don't know this condition exists and we're not acknowledging it. So we do have a team of engineers evaluating

Page 81

treatment upgrade to the plant treatment systems. The two constituents where the regulations changed are total disolved solids and chlorine concentrations and we're looking at knocking those concentrations down to be within the new regulations when a new permit is needed.

But, again, this whole panel isn't the permit people. We do have people looking at that and the Chem Plant acknowledges that is a problem.

AUDIENCE MEMBER: I guess what I was wondering then is, is that really feasible if it hadn't been done before, is it feasible now to make it so that it meets permit standards?

MR. PIERRE: The answer is, it is feasible, and the Department of Energy would provide sufficient resources in order to achieve that.

Again, it has to do a lot with the permit program, which is outside of our sphere, and they would do the evaluations. I know that if there was something like an NPDES with an intermittent stream, you would have to meet water quality at the point of discharge. There would be no dilution. And the land app folks would have a similar kind of attitude, and, that is, what is the

Page 82

impact to the groundwater? What is the impact -- especially if you're at 1 and one-half million gallons per day, it's kind of hard to say that there is some sort attenuation. I mean, the Warm Waste Pond at the Test Reactor Area was a similar example where cesium was highly attenuated by the soil, but when you're into the millions of gallons per day, you can move most anything.

AUDIENCE MEMBER: In regards to your model of the aquifer, I was just wondering if considerations about global warming have been taken into that? I know that we can't foresee what will be happening with that.

MR. RENO: We don't foresee there being any impacts to the aquifer related to global warming effects. Did I misunderstand the question?

AUDIENCE MEMBER: No. Dealing with the changes in the water cycle?

MR. PIERRE: There are two issues. One is, have we looked at it in our model of the Snake River Plain Aquifer? And I think what Scott was saying was no. Would we look at it as a potential and safety factor in our modeling of the INEEL CERCLA Disposal Facility -- I'm trying to avoid the

Page 83

acronyms, but it's an acronym within an acronym so it's hard to do that.

But with regard to the ICDF, we talk. And one of the things that we're able to do now is talk about here are the basic concepts. When you go through the 10 and 30 percent design, that's when you actually put meat on the bone and you start identifying safety factors, so in building a land fill -- if we're trying to buy a land fill that is going to last a thousand years, do you need to do more than just take what was the last five years of meteorological data and project, the answer is yes.

As far as the aquifer itself, this aquifer is 460 feet below the surface, and the water that is in the aquifer is losing because there is an awful lot of water being pumped at the Idaho National Engineering Laboratory. As far as if you're changing the cycle of evapo transpiration, that hasn't been looked at as far as the recharge to the aquifer, so as far as I know to date, we have not been looking at, this aquifer as tremendously losing its water elevation.

And I would guess on INEEL -- since INEEL has bumped activity as far as water usage, it

Page 84

has been declining over the years. I'm not sure how important that is to this as far as global warming had enough impact as far as the potential pumping of water than the loss from evaporation.

MR. JAMES: With regard to restoration of the aquifer, none of the technologies that are envisioned would emit any sort of greenhouse gases. The fuel to provide the energy for treatment would be from electric sources, so the only emission, the carbon dioxide and other emissions would be whatever fraction of that electrical energy is generated from the Fossil Fuel Plant, but there has been no studies to determine was that is to date.

MR. JENKINS: Are we even coming closer to answering your question?

MS. EVANS: Can you focus your question a little bit.

AUDIENCE MEMBER: That's okay. You've answered some other questions in the process.

AUDIENCE MEMBER: What about the people? Has the Department of Energy even thought about, you know, since 1952 that you have been doing this, pumping this stuff down into the aquifer without thinking about anything, then you

stopped in the late '80s? What about the folks that are down the river? I mean, as far as -- and the other thing I have to say, every time I come to one of these, and I do appreciate them, but if you think of this common person, how are you serving them? You're here. There is a handful of us. How is it that this information, once again I say this, can be said and the stated and given in a way so that these people who are affected, the Idahoans that are affected have some more -- I mean, it's like a courtesy, more awareness without sequestering it to all this technology. I mean, I'm not an engineer. I'm a psychotherapist, and I care about this stuff. I'm wondering about all of my -- really -- my brothers and sisters out there who are suffering some of the consequences, or maybe didn't they just give a shit.

MR. RENO: Of course, Erik is involved in the outreach activity that the DOE does. We send out copies of the proposed plan, all the interested parties come to these meetings and want to read these documents. We met with the members of the ShoBan Tribe on Monday, then public meeting in Idaho Falls on Monday. We met with the Citizens' Advisory Board, we went over this with

them Tuesday morning, and then on to Twin Falls with people in the Magic Valley. We are here tonight. We will be in Moscow on Thursday. We want to know what people say.

I realize this is overwhelming for people. It's overwhelming for us. If you look over on that table, that is our technical report on the RI/FS. A lot of data and factoids are not necessarily in this report because we made a conscious decision when we put this proposed plan out that we did not want to send a 250 page manifesto to everybody's mailbox. We wanted to keep it to 50 pages and have the common man try to go through it.

I hope -- we went through a focus group, members of the Snake River Alliance were in that, to try to ask them is this understandable by people. And, generally, I think the answer was, "Boy, this thing is a monster. It's so complex. It's mind boggling." But they thought that we had broken it down to terms that were generally understandable but yet did not leave out some of the meat. It's a trade off and a balance and, certainly, I don't think that we will make everybody happy from that standpoint, but we try to

serve the most people.

MR. PIERRE: Is that answer enough for your question?

AUDIENCE MEMBER: Go ahead. Give me whatever you can here.

MR. NITSCHKE: I just want to make one comment about endangering all our brothers and sisters out there, and these past practices. I mean, I think no one of us would support that we would do everything identically to what we did in those days, but they were common industrial practices and so forth. And for all these contaminants that you hear about, there is no risk unless there are people exposed to them. And these contaminants, for the most part, have been retained in a very small area, that there is no public access. Worker exposures are monitored and controlled. So we really haven't endangered people unnecessarily. What this team is trying to do is provide the assurance that that doesn't happen. So we're taking steps today with greater knowledge than we had then to provide that assurance to you.

MR. PIERRE: First of all, again, past practices: Should people have known better? It's a wonderful question to answer with hindsight.

And, obviously, Hanford used cribs, had a little bit of dissolution. Idaho put it right in the sole-source aquifer.

As Bob was saying, though, what we're trying to protect is this resource for future generations. For places like Test Area North where there was an exceedance of MCLs, trichloroethylene we put a sparging unit on the water tank to make sure that it did not exceed safe drinking water levels.

The CFA is monitored and so are other production wells. So workers are being protected at the same level as your drinking water supplies that they cannot exceed the safe drinking water rec numbers. The radionuclides, that is 4 millirems per year. That is a low number. I know, I won't forget. Are we in the ballpark?

AUDIENCE MEMBER: Have you thought about making an apology even though you're saying they are not endangering anybody? Have you thought about being compassionate about what could happen?

MR. PIERRE: If we lose our institutional knowledge, if we don't put things in place that will ensure that future generations are protected, then we will have the same experiences

Page 89

that happened elsewhere where people build shopping malls and all of a sudden there is orange ooze coming through the parking lots.

FORMAL PUBLIC COMMENT

AUDIENCE MEMBER: I actually have to go. I was hoping to go make a comment on the public record. I was wondering if that would be possible.

MR. PIERRE: If people would like, what we could do is go to the formal comments and then continue with Q and A.

AUDIENCE MEMBER: I don't mean to inconvenience anybody, but I will have to walk out.

AUDIENCE MEMBER: I understand. We want you to stay.

AUDIENCE MEMBER: I just wanted to make a brief comment for the record. My name is Steve Ramono, and I work for American Ecology Corporation which is based here in Boise, Idaho.

Through our subsidiaries, we are actually the oldest commercial company dealing with radioactive waste in the country. We have been operating since the early 1960s when the first

Page 90

disposal site by the company was developed, actually in the state of Nevada.

There is a variety of comments that we would like to put on the record. Firstly, to commend you folks for making the effort of going around the state to meet with people and talk with them and hear from them. That is very important. We certainly encourage you to keep doing that.

Secondly, in a general sense, this is perhaps the overriding comment, we believe that your plan needs to take a fundamentally different view on how you're protecting the Snake River Plain Aquifer. Particularly, the policy towards protecting the aquifer should be the overriding alternative looked at and that other alternatives should flow out of that.

In a real sense, that leads to several different recommendations on our part. Firstly, we would recommend that you reject any alternative which would involve the disposal of clean-up materials on the site over the sole source aquifer. We're a commercial company to propose developing a disposal site on the INEEL. And that type of hydrogeologic environment, it would be impossible to meet the established federal

Page 91

requirements under the NRC 10 CFR, part 61, regulations governing commercial disposal of low-level radioactive waste.

For that reason, we believe the same level of restriction, the same level of stringent protection of the environment should also apply to the Department of Energy in the management of the waste which it has. Perhaps, in general terms, what we would be suggesting is that there is a lot hard work that is going to go into cleaning up the mistakes of yesterday. And these mistakes should not be perpetuated until tomorrow by building a future disposal facility to accept these wastes.

Whether these wastes are disposed of at the DOE site, whether they are disposed of at the private disposal site, both of those options we believe should be looked at and whatever option that is selected, that disposal site should not be over the Snake River aquifer.

We should also note -- and it's certainly not your fault that there is a preoccupation in the approaches to many CERCLA cleanups to look at a health-based standard only. In the case of Idaho and in the case of the Snake River Plain Aquifer, not only the economic value,

Page 92

but the related perceptual value can be very real.

When one looks at economics of the impact of low-level radioactive waste leaching and impacting natural resources, the perception the public has can be just as real in the effect it would have on, for example, agricultural prices. And all the scientists who might say, well, we met the health standard, we have not exceeded regulatory limit, the permit has been satisfied. That may very well account for little when a farmer markets his product down the road.

And we would ask that you consider that to the overall assessment of that alternative of disposing over the aquifer. In other words, all standards could be met, but significant damage can still be done to the state of Idaho economy.

While it's not within the scope of what you're looking at, we would also ask that you consider the issue of the existing radioactive waste management complex, which does currently dispose of low-level radioactive waste in a facility on site.

We understand the department is planning to go close that facility sometime in the early part of the next decade. We commend that decision

Page 93

and recommend that that decision be accelerated.
And, finally, in relation to looking at the cost of disposal for public versus private disposal, we note that -- and we received the explanation earlier that off-site disposal would be markedly more expensive than an on-site solution.
So setting aside the environmental policy issue, which I noted earlier, I would suggest that a sharpening of pencils would be appropriate to look at what the actual costs of these other off-site options for disposal might be. Particularly, if you're looking at comparing a newly developed DOE on-site disposal facility, which would include all the engineering work, all the contractor work, all the coordination among contractors and among government agencies, essentially that it be a fully loaded cost estimate, not simply the cost of disposal once the place was opened and ready to accept waste. That it really be a fully loaded cost, to consider all the development expenses including the government agencies involved, if those costs then become paired against private sector options and also existing DOE facility options.
With that, I thank you for your time and

Page 94

I apologize for taking things out of turn.
MR. PIERRE: Do other people want to formally comment now or continue with the questions?
MR. JENKINS: Do we have any notice other questions before we go to public comment?
AUDIENCE MEMBER: Why don't you go ahead and do the comments.
MR. SIMPSON: I just wanted to remind people that your comments will be responded to in the responsive summary section in the Record of Decision, which is supposed to be signed this next summer.
AUDIENCE MEMBER: My name is Pamela Allister. I'm speaking as the executive director of the Snake River Alliance, and I live in Boise. And with your permission, I'm going to read into the record a soon-to-be-published, over the next day or two, article in our newsletter, and then we will give you a written copy when we get it finalized.
"Building bombs is a dirty business and the dirtiest production step of all is reprocessing spent nuclear fuel to extract bomb ingredients. Only three sites" -- this may be four -- "ever

Page 95

processed spent fuel, yet reprocessing accounts for 99 percent of their radioactivity and all of DOE's waste.
"INEEL reprocessed from 1952 to 1992 and as a result, parts of the Chem Plant are intensely contaminated. A clean-up plan for the Chem Plant has been published and public comments may continue to be received until December 22nd. The goals are that the Chem Plant be clean enough for people to live there by 2095 and that contamination then in the Snake River aquifer be low enough for people to get water nearby.
"Contaminated soil and water aren't easy to fix. Capping some of the waste and limiting the waste above the contamination so it won't be driven down toward the aquifer so readily, with monitoring for the foreseeable future, is one idea.
"Under the plan, contaminated soil not capped or protected by buildings would be moved to a lined and capped soil dump that might cover 54 acres. Most of the options seem reasonable with a heartbreaking caveat. It is increasingly apparent that when INEEL cleanup is done, an enormous amounts of nuclear contamination will remain above the Snake River aquifer. A cumulative

Page 96

extent of the remaining parallel will remain unknown until most of the predicted clean-up sources are gone.
"The Chem Plant clean-up plan illustrates the site-wide problem. The most serious environmental threats are in and around the Tank Farm that holds the radioactive acids left by reprocessing. There are 20 underground liquid storage tanks ranging from size of 18,000 gallons to 3,000 gallons. Spills and leaks in the Tank Farm piping account for 95 percent of the radioactivity in Chem Plant soils and that dirt is in a direct column to the aquifer.
"Decisions about the Tank Farm have yet to be made. Those decisions will limit the soil clean-up options. Further, there are dozens of buildings at the Chem Plant and some are highly contaminated. The current plan doesn't address how or when to decontaminate those buildings. We won't even know what waste will be allowed in the soil dump until after it's approved. We are told that INEEL cleanup is going forward. Where will we be when we get there? What will be left behind?"
I would also like to say that I appreciate a great deal the effort that you have

Page 97

made with this particular plan. Both to prepare it -- I think it's one of the most clearly and easily read plans that I have had to tackle on my late night journeys through these documents.

And I also really appreciate the fact that you are spending so much time and energy going into the communities. I do not think you bear the responsibility in any way that people feel an overload and can't always get here. I appreciate very much the presentation that you gave tonight. It was clear, concise, speedy, and very understandable.

Now, I'm going to change hats for just a moment. I'm going to speak as Pam Allister, a citizen who lives in Boise, Idaho. Very quickly, I would like to say that I have a great deal of personal concern -- this is not a statement on behalf of the alliance -- about the percolator, percolation ponds and about the use of the millions of gallons of water that are, basically, sucked up out of the aquifer, dispersed through this DOE facility and then dropped back down into the aquifer and pushing contaminants along.

I have a great deal of concern that this is not well thought out and has not been well

Page 98

thought out, and I shudder with fear as I listen to some of the proposed new missions for INEEL. I believe that until -- I propound that until cleanup has been accomplished in a satisfactory way, that we should not begin another mission of any great extent at INEEL, particularly if it is going to use the natural resources of water or the natural resources that are involved in generating electricity for these enterprises. Thank you.

MR. SIMPSON: Thanks, Pam. Would anyone else like to make any comments? Emily? Sorry, I don't mean to put you on the spot.

MR. PIERRE: If not now, at least consider filling out the --

AUDIENCE MEMBER: I will do a written comment.

MR. SIMPSON: We do have postage-paid comment forms and the proposed plan also has a form.

MR. PIERRE: Would you like to make any comments?

AUDIENCE MEMBER: If I make may comments, I will make them written, thanks.

MR. SIMPSON: Just to remind you that the comment period ends on December 22nd. Until

Page 99

that time, if you have questions reviewing the plan, you can call me or --

MR. PIERRE: Before you wrap up, are there other questions? You sound like you're wrapping up. Are there other questions people wanted to ask us?

AUDIENCE MEMBER: Can you give a few words to the different initiatives that they are that Pam did mention about the new things that they are using at INEEL because I know they want to perc up their image of a dead site.

MR. PIERRE: Venture Star are making fuel batteries, RTGs, thermal electric generators are a couple of the items being discussed.

Most of the ones that I know that are being discussed do not involve the INTEC facility. As I said, I just don't know of anybody seriously talking about any future use of the INTEC. The Venture Star and RTG would be up at the Test Area North location.

AUDIENCE MEMBER: We spent a lot of time looking into the past. We don't know what is in the future.

MR. SIMPSON: Any other questions? And just getting back to what I said, when you're

Page 100

reviewing this document, if you have questions, give me a call or give any one of the project managers a call, and we'll offer a briefing. I have had a request from Beatrice for a briefing, so I'll put that together.

Also, we will be back in Boise this next spring when we'll be talking about clean up of the Central Facilities Area, which is Waste Area Group 4, and also Waste Area Group 5, which is the Power Burst Facility and Auxiliary Reactor Area.

MR. PIERRE: Any questions of the high level waste guys in the back?

AUDIENCE MEMBER: We'll get you next time.

AUDIENCE MEMBER: Is the Idaho Statesman here, I wondered?

MR. SIMPSON: Actually, I checked today. Rocky was on vacation.

With that, I would just like to thank you for coming out, and once again, thanks for your continued support, and we'll see you in the spring.

(Meeting concluded at 9:40 p.m.)

STATE OF IDAHO } ss.
County of Ada)

I, NANCY SCHWARTZ, a Notary Public in and for the State of Idaho, do hereby certify:

That said hearing was taken down by me in shorthand at the time and place therein named and thereafter reduced to computer type, and that the foregoing transcript contains a true and correct record of the said hearing, all done to the best of my skill and ability.

I further certify that I have no interest in the event of the action.

WITNESS my hand and seal this 30th day of December, 1999.

Nancy Schwartz, Notary Public in and for the State of Idaho

My commission expires:
September 28, 1998

-B-

-D-

-E-

-T-